Date: Fri, 9 Sep 94 04:30:21 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #302
To: Ham-Ant

Ham-Ant Digest Fri, 9 Sep 94 Volume 94 : Issue 302

Today's Topics:

2 meters quad help (4 msgs)
300ohm twinlead, outdoors?
Antenna gain ratings?
Info on Autek SWR/Z/L/C Meter
Poleline Inc (?)

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 8 Sep 1994 16:01:30 GMT
From: noc.near.net!xap!usenet@uunet.uu.net
Subject: 2 meters quad help
To: ham-ant@ucsd.edu

Mike Debandi <iw1cfl@ik1qld-10.ampr.org> wrote:
>Hello folks!
>I will like to build a 2-element quad to ise on 2 meters band.
>I need the dimension and spacing for the elements, and how I can build
>a suitable balun for this antenna.

Mike, here is something I saved from a long time ago! I haven't build
a quad for 2m so I can't say how well this will work, but my 6m quad
had worked fine. Good luck, Mike. Quads are easy to build and work just
great! You can certainly omit the two directors for a two-element quad.
 73 de Scott WO1G

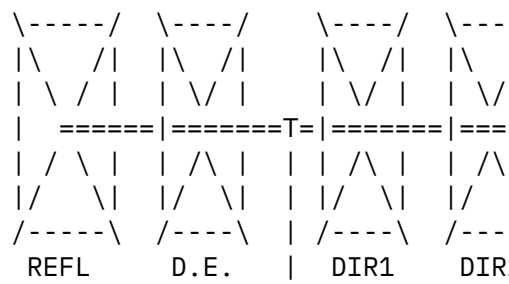
2 Meter, 4 Element Quad Antenna

This describes method for manufacturing a 4 element quad antenna from easily obtainable materials. I have made this antenna and it works great with and SWR below 1.2:1 across the entire 2 meter band.

This project should take about 3 hours to finish.

Material List

1. 8 each 3/8" wood Dowel
2. 1 each 8 foot long, 1 inch dia. PVC Pipe, Heavy wall
3. 1 each 1 inch PVC TEE
4. 25 feet #14 or #16 gage solid insulated wire
5. 1 each PL-259 Socket

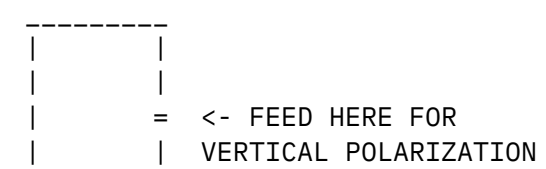


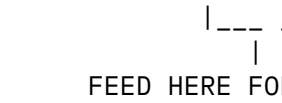
FROM CENTER OF REFLECTOR TO CENTER OF DRIVEN ELEMENT = 20.5 INCHES
FROM CENTER OF DRIVEN ELEMENT TO CENTER OF DIRECTOR 1 = 12 5/16 INCHES
FROM CENTER OF DIRECTOR 1 TO CENTER OF DIRECTOR 2 = 12 5/16 INCHES

CUT LENGTHS

ELEMENT	WIRE LENGTH	HOLE TO HOLE ON DOWEL *
REFLECTOR	86 1/8 INCH	30 1/8 INCH
DRIVEN EL.	81 15/16 INCH	28 5/16 INCH
DIRECTOR 1	77 15/16	27 1/4 INCH
DIRECTOR 2	74 INCH	25 7/8 INCH

* CUT DOWELS ABOUT 1 INCH LONGER THAN THESE LENGTHS.





After you have put your antenna together, solder the wires of each element (except the driven) end to end. Run the coax (RG58U is best) and secure with electricians tape. Solder the center of the coax onto one end of the driven element, and solder the shield onto the other end of the driven element. This project begs for creativity. See what you can do to improve this antenna (I made mine in small sections so I could put it into my trunk for portable operations). After you get it built, try it out on a T-hunt. A one sheet instruction sheet, with better information than I was able to pass on here, is available for an SASE to: Tom Shelton, AA6MZ 40672 178th Street East Lancaster, CA. 93535 Make sure you enclose a short note telling me what you want. Have fun with this antenna... 73 de Tom

AA6MZ @ WA6PEZ.CA

Scott Sminkey email: sasminkey@eng.xyplex.com
Software Sustaining Engineering voice: 508 952-4792
Xyplex, Inc. fax: 508 952-4887
295 Foster St. (Opinions, comments, etc. are mine,
Littleton, MA 01460 not Xyplex's...)
"Ollie ollie oxen-free! Pass it along." - Swami Bill

Date: 8 Sep 1994 11:05:11 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!EU.net!Germany.EU.net!news.dfn.de!news.belwue.de!news.uni-stuttgart.de!moritz@network.ucsd.edu
Subject: 2 meters quad help
To: ham-ant@ucsd.edu

Hello Mike,

Your posting interests me, since I am wonderinf why you should prefer a quad over a yagi. The advantages of a quad do not really come out on VHF, (good prformance when installed at low heights and wide bandwidth). You should go for a yagi.

73, Moritz DL5UH

Date: 8 Sep 94 16:28:17 EDT
From: psinntp!main03!landisj@uunet.uu.net

Subject: 2 meters quad help
To: ham-ant@ucsd.edu

In article <18237@ik1qld-10.ampr.org>, iw1cfl@ik1qld-10.ampr.ORG writes:
> Hello folks!
> I will like to build a 2-element quad to ise on 2 meters band.
> I need the dimension and spacing for the elements, and how I can build
> a suitable balun for this antenna.
> Can anyone help me? Any comment will be apprecciated.
>
> 73 de Mike
There is a portable 2el quad described in the ARRL antenna book. I built it and it works pretty well. It's matched with a stub and series cap. I'll try to remember the dims tomorrow. I believe the same book describes a 4el that I also built. It works well too. Mechanics are the toughest part of doing these. I used PVC pipe, with the boom reinforced with oak dowelling. It's still kind of clumsy and I need to come up with something better.

Joe - AA3GN
(landisj@drager.com)

Date: 8 Sep 1994 16:24:37 GMT
From: pa.dec.com!nntpd.lkg.dec.com!iamu.chi.dec.com!little@decwrl.dec.com
Subject: 2 meters quad help
To: ham-ant@ucsd.edu

In article <18237@ik1qld-10.ampr.org>, iw1cfl@ik1qld-10.ampr.ORG writes:
|>Hello folks!
|>I will like to build a 2-element quad to ise on 2 meters band.
|>I need the dimension and spacing for the elements, and how I can build
|>a suitable balun for this antenna.
|>Can anyone help me? Any comment will be apprecciated.

Skip the balun as I've found that 2 meter quads work fine without them. In fact many people never use baluns with quads on any band.

Here is a theoretical 2 element 2 meter quad that should be able to be matched to 50 ohm coax simply by altering the length of the driven element a bit. Dimensions are in meters. x is distance from reflector, l is element length.

	Ref	Driven
x	0.000	0.315
l	2.259	2.084

Here is a 3 element one:

	Ref	Driven	Dir 1
x	0.000	0.351	0.569
l	2.259	2.156	1.908

And a 4 element one:

	Ref	Driven	Dir 1	Dir 2
x	0.000	0.259	0.620	0.918
l	2.208	2.099	2.033	1.995

And a 5 element one:

	Ref	Driven	Dir 1	Dir 2	Dir 3
x	0.000	0.201	0.428	0.901	1.205
l	2.219	2.090	2.005	2.080	1.986

Finally here is one from the ARRL Antenna book that works well from first hand experience. Please note, this antenna's dimensions are in inches.

	Ref	Driven	Dir 1	Dir 2
x	0	16	29	42
l	86	81	77	77

Quads for 2 meters are easy to build and work very well. Tuning them is simply a matter of adjusting the driven element's length to give a good match. I usually build mine out of the stiff aluminum clotheline wire that can be had for several dollars for 50-100'. I use little wire clamps to connect the open ends of the loops. Also, adjusting the spacing between the driven element and the reflector will typically alter the front/back ratio of the antenna.

In general for a 2 element quad, start with a driven element length of 1 wavelength and a reflector 5% longer than that. Use a spacing of .15 to .25 wavelengths. For a 3 element quad, pick a director length of 95% of a wavelength. For longer quads, either keep the 95% length for each director, or perhaps taper them slightly as you increase the number of them.

Have fun and good luck.

73,
Todd
N9MWB

Date: Thu, 08 Sep 94 08:31:28 EST
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!wupost!slacc.com!
nf0r@network.ucsd.edu
Subject: 300ohm twinlead, outdoors?
To: ham-ant@ucsd.edu

Hi Rich! What you might consider is fabricating your own twin-lead from
two identical lengths of coax, RG-58 is fine. Ground the shields at the
tuner end but let them float at the feedpoint to avoid a groundloop.
This will give you the necessary environmental protection for several
years. I live in a townhouse and use this method to feed my attic
antenna from a basement shack. BTW, the feedline does not have to be
taped together, each side can find it's own path to the antenna as long
as the individual lengths are identical. Also, you can use any
impedance, 50, 75 or ?ohms makes no difference. Good luck! NF0R, Dave

--
 SLACC STACK BBS - St. Louis, Missouri USA
The Bulletin Board Service of the St. Louis Area Computer Club
 For information, email to: server@slacc.com Subject: HELP
 +1 314.367.1903

Date: Thu, 8 Sep 1994 13:45:53 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!newsxfer.itd.umich.edu!
news1.oakland.edu!rcsuna.gmr.com!kocrsv01!c21rag@network.ucsd.edu
Subject: Antenna gain ratings?
To: ham-ant@ucsd.edu

In article <34iqb6$epf@netnews.upenn.edu>, depolo@blue.seas.upenn.edu (Jeff
DePolo) writes:
> In article <kgk-0609941536070001@kgkmac.repoc.nwu.edu>,
> Kenneth Kalan <kgk@nwu.edu> wrote:
> >
> >Some companies list the gain in dB, while others use dBd or dBi. From my
limited research, it appears that an antenna rated at 8 dBi is around 6 dB.
>
> dBi is decibels with an isotropic radiator as the 0dB reference
> dbd is decibles with a half-wave dipole as the 0dB reference

>
<Stuff deleted>
>
> It has been my experience that Cushcraft, Diamond, Comet, and several of the
> other manufacturers inflate their gain figures. Assume that the numbers
> they give are dBi unless otherwise stated. Remember: marketing guys write
> the catalogs, not the engineers. To the marketing guys, 9.0 dB looks better
> than 6.9 dB, so they use the 9.0 value and leave off the "i" in dBi.
>
> --- Jeff

Even when they say dbi or dbd, I'm skeptical. You can find essentially identical antennas in the Diamond and Comet catalogs, with exactly the same gain numbers, only one says dbi and the other says dbd. Personally, I define the abbreviations as 'db imaginary', 'db doubtful' and plain db as 'don't believe'.

This is not to say the companies don't make good antennas. You just have to take most claimed gain figures with a few grains of salt.

 Roger Grady K9OPO c21rag@kocrsv01.delcoelect.com
 Delco Electronics Corp. Kokomo, IN
 "All information and opinions are personal unless otherwise stated."

Date: 8 Sep 1994 06:54:44 -0700
From: nntp.crl.com!crl4.crl.com!not-for-mail@decwrl.dec.com
Subject: Info on Autek SWR/Z/L/C Meter
To: ham-ant@ucsd.edu

In article <33997@uswnvg.uswnvg.com>,
jdonimi@uswnvg.com (Jeremy A. Donimirski) wrote:

> Does anyone own one of these Autek meters? If so, do you like it? How well
> do the various functions work? Is it convenient to use?

Jeremy -

I too am quite satisfied with my RF Analyst. -Lots- easier to use
than a noise bridge, and gives more precise readings! As to
convenience:
 Attach instrument to coax connector
 MAsh ON/OFF button
 Mash BAND button 'till approximate frequency on display
 Rotate TUNE / FINE TUNE knobs to tweak the frequency
 Mash the function button(s) to see the values
Can't get much easier than that.

Lou
----------Usual Disclaimers Apply----------
Internet: lgenco@crl.com Lou.Genco@LChance.sat.tx.us
Ham Radio Packet: N5SGL @ K3WGF.#SAT.TX.USA tcp/ip: n5sgl@sat.ampr.org

Date: 8 Sep 1994 13:55:05 -0400
From: newstf01.cr1.aol.com!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: Poleline Inc (?)
To: ham-ant@ucsd.edu

There is a company (I think in the midwest) that is the primary
manufacturer of Preforms for guy wires (also called guy grips, big grips,
ect). I think the name is Poleline Products Inc.

Anybody have a phone number or city location ??

Direct replies please !

Keith WB9TIY
BlckHole@aol.com

End of Ham-Ant Digest V94 #302
